

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Patent Application of

Anders HÖRLING et al

Application No.: 10/653,244

Filed: September 3, 2003

For: PRECIPITATION HARDENED WEAR  
RESISTANT COATING

Group Art Unit: 1772

Examiner: UNASSIGNED

Confirmation No.: 2817

**INFORMATION DISCLOSURE STATEMENT  
TRANSMITTAL LETTER**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed is an Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge \$\_\_\_\_\_ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of \$\_\_\_\_\_ is enclosed for the fee due.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620

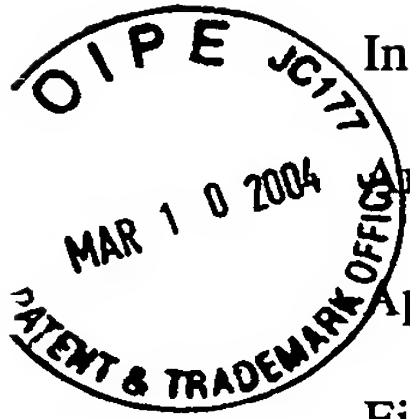
Date: March 10, 2004

By:

Ronald L. Grudziecki  
Registration No. 24,970

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50,891

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**FIRST**  
**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, Applicants hereby submit the information listed on the attached form PTO-1449 in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed. However, copies of the listed U.S. patents and U.S. patent application publications are not enclosed since it is no longer required according to the July 11, 2003 waiver of the requirement for copies of cited U.S. patents and U.S. patent application publications in national patent applications filed after June 30, 2003 and international applications entering the national stage under 35 U.S.C. § 371 after June 30, 2003.

The documents are being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since these documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b) no fee or statement is required.

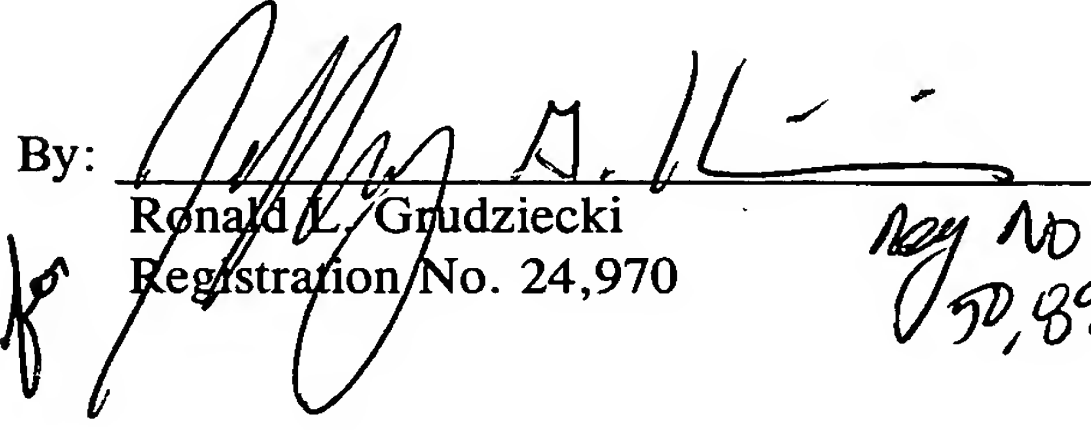
It is respectfully requested that an Examiner-initialed copy of the attached form PTO-1449 be returned to the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: March 10, 2004

By:

  
Ronald L. Grudziecki  
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Alexandria, Virginia 22313-1404  
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Substitute for forms 1449A/PTO &amp; 1449B/PTO

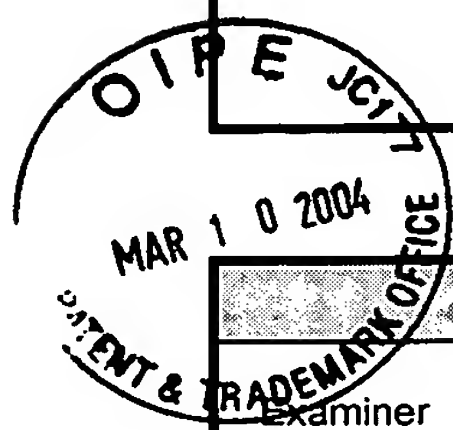
# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

 ATTORNEY'S DKT No.  
024445-377

 APPLICATION No.  
10/653,244

 APPLICANT  
Anders HÖRLING et al.

 FILING DATE  
September 3, 2003

 GROUP  
1772


## **U.S. PATENT DOCUMENTS**

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	5,272,014		LEYENDECKER et al.	12-21-1993
	5,330,853		HOFMANN et al.	07-19-1994
	5,503,912		SETOYAMA et al.	04-02-1996
	5,981,049		OHARA et al.	11-09-1999
	6,077,596		HASHIMOTO et al.	06-20-2000
	6,103,357		SELINDER et al.	08-15-2000
	6,254,984	B1	IYORI	07-03-2001
	6,309,738	B1	SAKURAI	10-30-2001
	2002/0081161	A1	YAMADA et al.	06-27-2002

## **FOREIGN PATENT DOCUMENTS**

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes No
	1 219 723	A2	EP	07-03-2002	
	11310867		JP	11-09-1999	
	9295204		JP	11-18-1997	

## **NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	Hermann A. Jehn et al., MORPHOLOGY AND PROPERTIES OF SPUTTERED (Ti,Al)N LAYERS ON HIGH SPEED STEEL SUBSTRATES AS A FUNCTION OF DEPOSITION TEMPERATURE AND SPUTTERING ATMOSPHERE, J. Vac. Sci. Technol. A 4 (6), 2701 (1986)
	O. Knotek et al., ON STRUCTURE AND PROPERTIES OF SPUTTERED Ti AND Al BASED HARD COMPOUND FILMS, J. Vac. Sci. Technol. A 4 (6), 2695 (1986)
	B.-J. Kim et al., HIGH TEMPERATURE OXIDATION OF (Ti <sub>1-x</sub> Al <sub>x</sub> )N COATINGS MADE BY PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION, J. Vac. Sci. Technol. A 17(1), 133 (1999)
	W.-D. Münz, TITANIUM ALUMINIUM NITRIDE FILMS - A NEW ALTERNATIVE TO TIN COATINGS, Int. Conf. Met. Coat., San Diego, USA (1986)
	Harland G. Tompkins, OXIDATION OF TITANIUM NITRIDE IN ROOM AIR AND IN DRY O <sub>2</sub> , J. Appl. Phys. 70 (7), 3876 (1991)
	D. McIntyre et al., OXIDATION OF METASTABLE SINGLE-PHASE POLYCRYSTALLINE Ti <sub>0.5</sub> Al <sub>0.5</sub> N FILMS: KINETICS AND MECHANISMS, J. App. Phys. 67 (3), 1542 (1990)
	H. Holleck, METASTABLE COATINGS - PREDICTION OF COMPOSITION AND STRUCTURE, Surf. and Coat. Technol. 36, 151 (1988)

Examiner Signature	Date Considered
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. **SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.